

## Data Validation Report

**Project/Site Name:** OMEGA CHEMICAL SUPERFUND SITE

**Sample Delivery Group (SDG):** 04C015

**Parameters:** Hexavalent Chromium

**Method:** EPA Method 218.6

**Laboratory:** EMAX Laboratories, Inc., Torrance, CA

**Samples:**

Sample_ID	Sample Description	Collection Date	Matrix
0C2-MW1A-W-0-1	Field Sample	3/2/04	Water
0C2-MW1B-W-0-2	Field Sample	3/2/04	Water
0C2-00-W-2-3	Field Sample	3/2/04	Water
0C2-MW2A-W-0-4	Field Sample	3/2/04	Water

## **Introduction/Summary**

This data review report covers the sample delivery group and associated samples listed on the cover sheet. The analyses were per USEPA Method 218.6. The quality assurance and quality control procedures (QA/QC) were per method and project specific criteria.

This review is based on project and method specific criteria.. The following sections summarize the criteria and detail noted deviations if any. Tables summarizing all data qualification flags are provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from specified protocols (P) or is of a technical advisory nature due to sample matrix (A).

Data qualifiers, if any, are summarized at the end of this report.

The data qualifiers that are used those in the EPA Validation Functional Guidelines and are defined as follows:

U – The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N – The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification.”

NJ – The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

UJ – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R – The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

## **I. Holding Times**

Hexavalent Chromium analyses were carried out within 24 hours of collection for water.

## **II. Calibration**

For initial calibration, at a minimum three standards were analyzed prior to sample analysis with criteria of linear regression correlation coefficient  $\geq 0.995$ .

Continuing calibration was run at the beginning, after every 10 samples and at the end of analyses. The continuing calibration percent differences (%D) were less than 10 percent..

## **III. Blanks**

Method blank analysis was performed at the frequency of once for every analytical batch.

The concentrations of analytes in the blanks were less than the reporting limit with no detects reported for any of the blanks.

## **IV. Accuracy and Precision Data**

### **a. Laboratory Control Sample**

An LCS/LCSD per analytical batch was analyzed.

All percent recoveries (%R) and RPD were within laboratory control limits.

### **b. Surrogate Spikes**

Not applicable for this method

### **c. Matrix Spike/Matrix Spike Duplicates**

An MS/MSD set was analyzed with this SDG. All percent recoveries (%R) and RPD were within criteria.

## **V. Laboratory Duplicates**

Sample 0C2-MW1A-W-0-1 was analyzed in duplicates. RPD was within QC limits.

## **VI. Compound Quantitation and Reporting Limits**

Algorithms were verified to be correct.  
Reporting limits were per project specifications.

## **VII. Overall Assessment**

Data were found to be per laboratory specifications as noted above with the exception of samples and analytes listed in the table at the end of this report, if any.

**Omega Chemical Superfund Site Hexavalent Chromium - Data Qualification  
Summary - SDG 04C015**

No data have been qualified for this SDG.

**Omega Chemical Superfund Site Hexavalent Chromium – Blanks Data  
Qualification Summary - SDG 04C015**

No data have been qualified for this SDG.

## Data Validation Report

**Project/Site Name:** OMEGA CHEMICAL SUPERFUND SITE

**Sample Delivery Group (SDG):** 04C027

**Parameters:** Hexavalent Chromium

**Method:** EPA Method 218.6

**Laboratory:** EMAX Laboratories, Inc., Torrance, CA

**Samples:**

Sample_ID	Sample Description	Collection Date	Matrix
0C2-MW4A-W-0-5	Field Sample	3/3/04	Water
0C2-MW4A-W-1-6	Field Sample	3/3/04	Water
0C2-MW4B-W-0-7	Field Sample	3/3/04	Water
0C2-MW4C-W-0-8	Field Sample	3/3/04	Water
0C2-MW5A-W-0-9	Field Sample	3/3/04	Water
0C2-MW6A-W-0-10	Field Sample	3/3/04	Water
0C2-MW6A-W-1-11	Field Sample	3/3/04	Water

## **Introduction/Summary**

This data review report covers the sample delivery group and associated samples listed on the cover sheet. The analyses were per USEPA Method 218.6. The quality assurance and quality control procedures (QA/QC) were per method and project specific criteria.

This review is based on project and method specific criteria.. The following sections summarize the criteria and detail noted deviations if any. Tables summarizing all data qualification flags are provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from specified protocols (P) or is of a technical advisory nature due to sample matrix (A).

Data qualifiers, if any, are summarized at the end of this report.

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U – The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

J – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N – The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification.”

NJ – The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

UJ – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R – The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

## **I. Holding Times**

Hexavalent Chromium analyses were carried out within 24 hours of collection for water.

## **II. Calibration**

For initial calibration, at a minimum three standards were analyzed prior to sample analysis with criteria of linear regression correlation coefficient  $\geq 0.995$ .

Continuing calibration was run at the beginning, after every 10 samples and at the end of analyses. The continuing calibration percent differences (%D) were less than 10 percent..

## **III. Blanks**

Method blank analysis was performed at the frequency of once for every analytical batch.

The concentrations of analytes in the blanks were less than the reporting limit with no detects reported for any of the blanks.

## **IV. Accuracy and Precision Data**

### **a. Laboratory Control Sample**

An LCS/LCSD per analytical batch was analyzed.

All percent recoveries (%R) and RPD were within laboratory control limits.

### **b. Surrogate Spikes**

Not applicable for this method.

### **c. Matrix Spike/Matrix Spike Duplicates**

One matrix spike sample was analyzed with this SDG. All percent recoveries (%R) were within criteria.

## **V. Laboratory Duplicates**

Sample 0C2-MW6A-W-1-11 was analyzed in duplicates. RPD was within QC limits.

## **VI. Compound Quantitation and Reporting Limits**

Algorithms were verified to be correct.  
Reporting limits were per project specifications.

## **VII. Overall Assessment**



Data were found to be per laboratory specifications as noted above with the exception of samples and analytes listed in the table at the end of this report, if any.

**Omega Chemical Superfund Site Hexavalent Chromium - Data Qualification  
Summary - SDG 04C027**

No data have been qualified for this SDG.

**Omega Chemical Superfund Site Hexavalent Chromium – Blanks Data  
Qualification Summary - SDG 04C027**

No data have been qualified for this SDG.

## Data Validation Report

**Project/Site Name:** OMEGA CHEMICAL SUPERFUND SITE

**Sample Delivery Group (SDG):** 04C043

**Parameters:** Hexavalent Chromium

**Method:** EPA Method 218.6

**Laboratory:** EMAX Laboratories, Inc., Torrance, CA

**Samples:**

<b>Sample_ID</b>	<b>Sample Description</b>	<b>Collection Date</b>	<b>Matrix</b>
0C2-MW8A-W-0-12	Field Sample	3/4/04	Water
0C2-MW8B-W-0-13	Field Sample	3/4/04	Water
0C2-MW8C-W-0-14	Field Sample	3/4/04	Water
0C2-MW8D-W-0-15	Field Sample	3/4/04	Water
0C2-00-W-2-16	Field Sample	3/4/04	Water
0C2-MW9B-W-0-17	Field Sample	3/4/04	Water
0C2-MW10A-W-0-18	Field Sample	3/4/04	Water
0C2-MW11A-W-0-19	Field Sample	3/4/04	Water

## **Introduction/Summary**

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This review is based on project and method specific criteria.. The following sections summarize the criteria and detail noted deviations if any. Tables summarizing all data qualification flags are provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from specified protocols (P) or is of a technical advisory nature due to sample matrix (A).

Data qualifiers, if any, are summarized at the end of this report.

The data qualifiers that are used those in the EPA Validation Functional Guidelines and are defined as follows:

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J – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

N – The analysis indicates the presence of an analyte for which there is presumptive evidence to make a “tentative identification.”

NJ – The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

UJ – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R – The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

## **I. Holding Times**

Hexavalent Chromium analyses were carried out within 24 hours of collection for water.

## **II. Calibration**

For initial calibration, at a minimum three standards were analyzed prior to sample analysis with criteria of linear regression correlation coefficient  $\geq 0.995$ .

Continuing calibration was run at the beginning, after every 10 samples and at the end of analyses. The continuing calibration percent differences (%D) were less than 10 percent..

## **III. Blanks**

Method blank analysis was performed at the frequency of once for every analytical batch.

The concentrations of analytes in the blanks were less than the reporting limit with no detects reported for any of the blanks.

## **IV. Accuracy and Precision Data**

### **a. Laboratory Control Sample**

One laboratory control sample per analytical batch was analyzed.

All percent recoveries were within laboratory control limits.

### **b. Surrogate Spikes**

Not applicable for this method.

### **c. Matrix Spike/Matrix Spike Duplicates**

An MS/MSD set was analyzed with this SDG. All percent recoveries (%R) and RPD were within criteria.

## **V. Laboratory Duplicates**

Sample 0C2-MW10A-W-0-18 was analyzed in duplicates. RPD was within QC limits.

## **VI. Compound Quantitation and Reporting Limits**

Algorithms were verified to be correct.  
Reporting limits were per project specifications.

## **VII. Overall Assessment**

Data were found to be per laboratory specifications as noted above with the exception of samples and analytes listed in the table at the end of this report, if any.

**Omega Chemical Superfund Site Hexavalent Chromium - Data Qualification  
Summary - SDG 04C043**

No data have been qualified for this SDG.

**Omega Chemical Superfund Site Hexavalent Chromium – Blanks Data  
Qualification Summary - SDG 04C043**

No data have been qualified for this SDG.

## Data Validation Report

**Project/Site Name:** OMEGA CHEMICAL SUPERFUND SITE

**Sample Delivery Group (SDG):** 04C055

**Parameters:** Hexavalent Chromium

**Method:** EPA Method 218.6

**Laboratory:** EMAX Laboratories, Inc., Torrance, CA

**Samples:**

<b>Sample_ID</b>	<b>Sample Description</b>	<b>Collection Date</b>	<b>Matrix</b>
0C2-MW7A-W-0-20	Field Sample	3/5/04	Water
0C2-MW3A-W-0-21	Field Sample	3/5/04	Water
0C2-IDW-W-0-22	Field Sample	3/5/04	Water



## **Introduction/Summary**

This data review report covers the sample delivery group and associated samples listed on the cover sheet. The analyses were per USEPA Method 218.6. The quality assurance and quality control procedures (QA/QC) were per method and project specific criteria.

This review is based on project and method specific criteria.. The following sections summarize the criteria and detail noted deviations if any. Tables summarizing all data qualification flags are provided at the end of this report. Flags are classified as P (protocol) or A (advisory) to indicate whether the flag is due to a laboratory deviation from specified protocols (P) or is of a technical advisory nature due to sample matrix (A).

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NJ – The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents its approximate concentration.

UJ – The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

R – The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

## **I. Holding Times**

Hexavalent Chromium analyses were carried out within 24 hours of collection for water.

## **II. Calibration**

For initial calibration, at a minimum three standards were analyzed prior to sample analysis with criteria of linear regression correlation coefficient  $\geq 0.995$ .

Continuing calibration was run at the beginning, after every 10 samples and at the end of analyses. The continuing calibration percent differences (%D) were less than 10 percent..

## **III. Blanks**

Method blank analysis was performed at the frequency of once for every analytical batch.

The concentrations of analytes in the blanks were less than the reporting limit with no detects reported for any of the blanks.

## **IV. Accuracy and Precision Data**

### **a. Laboratory Control Sample**

An LCS/LCSD per analytical batch was analyzed.

All percent recoveries (%R) and RPD were within laboratory control limits.

### **b. Surrogate Spikes**

Not applicable for this method.

### **c. Matrix Spike/Matrix Spike Duplicates**

An MS/MSD set was analyzed with this SDG. All percent recoveries (%R) and RPD were within criteria.

## **V. Laboratory Duplicates**

Sample 0C2-MW3A-W-0-21 was analyzed in duplicates. RPD was within QC limits.

## **VI. Compound Quantitation and Reporting Limits**

Algorithms were verified to be correct.  
Reporting limits were per project specifications.

## **VII. Overall Assessment**

Data were found to be per laboratory specifications as noted above with the exception of samples and analytes listed in the table at the end of this report, if any.

**Omega Chemical Superfund Site Hexavalent Chromium - Data Qualification  
Summary - SDG 04C055**

No data have been qualified for this SDG.

**Omega Chemical Superfund Site Hexavalent Chromium – Blanks Data  
Qualification Summary - SDG 04C055**

No data have been qualified for this SDG.